Norfolk Naval Shipyard

Norfolk, Virginia
Superfund Program Site Fact Sheet

Type of Facility: Naval Base Federal Facility

Funding: Department of Defense

Lead Agency: Navy

Site Description and History

The Norfolk Naval Shipyard (NNSY) is on the southern branch of the Elizabeth River in the city of Portsmouth, Virginia, 8 miles upstream from the confluence of the James and Elizabeth rivers. The following cities surround the NNSY: Portsmouth to the immediate west, Chesapeake to the east and south, and Norfolk to the north. The land areas of Chesapeake and Norfolk are separated from NNSY proper by the southern branch of the Elizabeth River to the east and by the confluence of the southern, eastern and western branches of the Elizabeth River to the north. NNSY consists of more than 1200 acres with four miles of shoreline, 30 miles of paved roads, 19 miles of railroad track, seven dry-docks, and more than 500 buildings.

NNSY lies entirely within the corporate boundaries of the City of Portsmouth, Virginia. Although not actively engaged in ship repair functions, two annexes are under the control of the shipyard:

- Southgate Annex, containing most warehousing and service structures, is a long-term radioactive material storage area within Southgate. This annex is within the corporate limits of Portsmouth, Virginia.

- St. Helena, currently inactive and in the corporate limits of Norfolk, is presently leased to the City of Norfolk. Plans are to turn it over to another parent command. This annex has never been engaged in NNPP radioactive work of material storage.

Beginning in 1963, NNSY was authorized to overhaul nuclear ships. Between 1965 and 1980, many nuclear submarines were repaired and conventional powered surface ships ranging from destroyers to aircraft carriers. Since 1980, the shipyard has provided a full range of industrial, manufacturing, and technological processes required for overhauling and repairing the modern high technology Navy warships such as: minor and major valve repair, overhaul, and replacement; repair and alteration of piping systems; calibration of

mechanical and electrical measuring instruments and equipment; overhaul of motors and generators; test and inspection of components and systems; as well as refueling.

In 1975, the Department of Defense (DOD) initiated the Installation Restoration (IR) Program to study disposal activities for hazardous and toxic materials at Navy and Marine Corps facilities. An Initial Assessment Study (IAS) was conducted at NNSY in 1982, followed by more detailed analyses in 1988 and 1992. Of the 19 sites investigated, 8 were finally recommended for additional study and they are currently under study in the IR Program.

The Navy's IR Program matches the process outlined in the U.S. Environmental Protection Agency's Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as the Superfund program. The various study stages are:

- Preliminary Assessment/Site Inspection (PA/SI) identifies potential threats to human health and the environment.
- Remedial Investigation (RI) analyzes contaminants and evaluates potential contamination migration from a site and risks to human health and the environment.
- Feasibility Study (FS) evaluates feasible cleanup methods to achieve environmental standards for human health and the environment.
- Proposed Remedial Action Plan (PRAP) outlines feasible alternatives and recommends remediation or cleanup method, if necessary.
- Public Comment Period/Meeting allows for public examination of the PRAP and expression of comments; public meeting held to present plan and answer questions.
- Record of Decision (ROD) specifies the cleanup method after evaluating public comments.
- Remedial Design (RD) involves preparation of construction specifications and other design plans for remediation.
- Remedial Action (RA) remediates or cleans the site to approved environmental standards.

The next study conducted was an Interim Remedial Investigation (IRI). Based on the results, a Remedial Investigation and Feasibility Study (RI/FS) is currently in progress.

NNSY was listed on the NPL on July 26, 1999.

Current Site Status

New Gosport Landfill at Norfolk Naval Shipyard (NNSY): This project involved the removal of abrasive blast material containing paint chips from Navy and private property. Screening of the soil/blast mixture removed extraneous material (concrete, wood, etc.) and stabilization with fertilizer reduced disposal cost by more than $1.4 million. The local community was involved through the whole project by participation in Restoration Advisory Board meetings and Navy distribution of project status fact sheets and flyers. This allowed the remedial design to incorporate the creation of 1.9 acres of new wetlands

along Paradise Creek and still realize significant overall project savings. NNSY won the 2001 Chief of Naval Operations Environmental Award for Environmental Restoration at a US Navy installation.

Site 2 - Scott Center Landfill: The Scott Center Landfill is approximately 3 to 4 acres in size and lies next to Paradise Creek on the western side of NNSY. The site was occasionally used during the 1950s for disposal of waste generated from dry dock operations. Waste reportedly disposed included abrasive blast grit, paint residues, sanitary waste, solvents, and other industrial residues. Also, hydraulic fill, a waste consisting of fine sand, clay, and water generated from maintenance dredging of nearby waterways, was disposed in the landfill. This material comprises the base of the landfill. The site is currently waiting for funding to cap the landfill.

Site 3 - Sanitary Landfill and Associated Sites: The Sanitary Landfill was used as the base landfill from 1945 through 1983. Waste disposed at this site included salvage waste; abrasive blast grit; boiler fly and bottom ash; residential trash and refuse; and industrial wastewater treatment plant sludge. The area is still used for oil reclamation operations.

Site 4 - Chemical Holding Pits: This is on the northern portion of Site 3. Five chemical waste pits received waste between 1963 and 1978.

Site 5 - Oil Reclamation Area: This area soils were contaminated with petroleum products from a 10,000-gallon tank removed in 1982.

Site 6: This is an area east of Site 4 where solvents were disposed whenever the pits at Site 4 were full. This site was used from the mid-1960s to 1977.

Site 7 - Bermuda Disposal Area: This site was used between the late 1950s and 1970s. The exact type and quantity of waste disposed is unknown.

Site 9 - Waste LiMe Pit: Site 9 is a semi-aboveground bermed impoundment on the east side of the NNSY. Waste calcium hydroxide (lime) sludge from NNSY's acetylene manufacturing plant was stored at this site following the closure of the plant in 1971. A removal action and site remediation are planned in March 2003.

Site 17 -Building 195 and Vicinity: Site 17 consists of the NNSY metal plating shop in Building 195 and the area immediately next to the north of the building. Plating solutions may have contaminated the building floor and soils next to the site from the early 1970s through 1982. Contaminated soil was excavated and removed during the rehabilitation of the plating shop in 1982. The ground surface north of the building has been completely paved over. The site is recommended for no further action.

Community Relations

Periodic meetings are held with local officials, civic groups, state and federal environmental regulators and NNSY through a forum called the Restoration Advisory Board. Public participation is encouraged. Members of NNSY and local communities have been interviewed and a Community Relations Plan has been developed. The plan contains information on the history and process of the environmental studies, the sites, and the community. It also outlines methods to keep the community informed on the sites during the various IR study stages and it is periodically updated.

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